

Water Supply Facilities Work Plan

for

**OKALOOSA COUNTY
DEPARTMENT OF GROWTH MANAGEMENT**

FINAL REPORT

Department of Growth Management

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I. INTRODUCTION

This Water Supply Facilities Work Plan is intended to aid in the review, planning, and permitting of projects that serve unincorporated Okaloosa County. The facility plan will summarize information on existing water supply sources, current design capacities, permitted withdrawals, current average daily rates, anticipated growth for a ten year planning period, and required improvements necessary within five years and ten years to meet projected demands. The work plan is consistent with and is prepared pursuant to the requirements of s163.3177(6)(c) F.S.

There are fourteen utilities providing potable water within Okaloosa County. Three are municipal utilities providing potable water exclusively within their corporate boundaries (Valparaiso, Ft. Walton Beach, and Mary Esther) and hence, are excluded from this report. The remaining eleven utilities serve customers of unincorporated Okaloosa County in fourteen service areas. These utilities include private water systems, cooperatives, municipal, and county owned systems. A map detailing the location of these service areas is included in Appendix C. The map is entitled “Okaloosa County Service Areas.” A list of these eleven providers is provided in the following table along with a summary of their current usage, permitted usage and permit expiration date.

Utility Name	Current ADR	Permitted ADR	Permit Expiration Date
Auburn Water System, Inc.	1.192	1.400	January 2010
Baker Water System, Inc.	0.200	0.245	March 2004
Crestview (City of)	1.900	3.710	May 2009
Destin Water Users, Inc.	3.400	3.460	September 2006
Holt Water Works, Inc.	0.100	0.130	July 2004
Laurel Hill (City of)	0.100	0.170	January 2009
Milligan Water System, Inc.	0.080	0.155	August 2007
Niceville (City of)	2.820	3.030	April 2004
OCWS Bluewater Service Area	1.070	1.200	April 2005
OCWS Garniers Service Area	4.960	5.750	April 2006
OCWS Mid County Service Area	0.580	3.610	March 2018
OCWS County West Service Area	0.600	0.810	June 2005
Seminole Community Center, Inc.	<i>requested</i>	0.113	April 2006
South Walton Utility Company, Inc. (Coastal & Well Field Combined)	2.500	7.190	June 2006 (Coastal) June 2018 (Well Field)

*All amounts listed in million gallons per day
OCWS = Okaloosa County Water & Sewer System*

The following sections of this report contain additional information on each of the utilities, their corresponding service areas, existing demand conditions, currently utilized water sources, future demand projections and projected water surpluses or deficiencies.

II. WATER SUPPLY FACILITIES

Auburn Water System, Inc.

The Auburn Water System is a not-for-profit member owned cooperative that serves the residents north of Crestview and south of Laurel Hill, between the Yellow River and the Walton county line. A detailed map of the system's service area is included in Appendix C. The supply sources for this system are five (5) Floridan aquifer wells with a combined capacity of 3.298 MGD. A sixth well is planned for implementation by 2005 that will give this system a combined capacity of 4.378 MGD. Auburn Water System is permitted to withdraw up to 1.4 MGD annual average by their consumptive use permit that will expire in 2010. The system serves a population of 12,085 and has an average daily demand of 1.192 MGD. The customer base is forecast to increase 2.5% annually for the planning period. While source supply is in place for anticipated growth through year 2013, a modification to the current permitted withdrawal amount will be required at the time the permit is renewed.

Auburn Water System Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
1.192	1.40	19830078	Jan 2010	3.298	Ground	Floridan

Auburn Water System Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Auburn #2	AAA0384	500'	350'	12"	50	445
Auburn #3	AAA5153	580'	330'	12"	50	500
Auburn #4	AAA5151	797'	542'	18"	100	800
Auburn #5	AAA5150	673'	410'	16"	75	600
Auburn #6	N/A	800'	N/A	18"	125	750

Auburn Water System Current and Projected Conditions

	Present	2008	2010	2013
Population Served	12,085	13,670	14,362	15,470
Avg. Daily Demand (MGD)	1.192	1.338	1.366	1.401
Demand per Capita (GPD)	99	98	95	91
Available Facility Capacity (MGD)	3.298	4.378	4.378	4.378
Facility Capacity Surplus (Deficit)	2.106	3.04	3.012	2.977
Permitted Amount ADR (*Expires 1/2004)	1.4	1.4*	1.4*	1.4*
Permitted Surplus (Deficit) ADR	.208	.062	.034	(.001)

Baker Water System, Inc.

The Baker Water System is a not-for-profit member owned cooperative that serves the residents in and around the community of Baker. A detailed map of the system's service area is included in Appendix C. The supply sources, also shown on the map, are three (3) Floridan aquifer wells with a combined supply capacity of 720,000 gallons per day (GPD). The current population of 2,625 and average daily demand is expected to grow at an annual rate of 1.3%. No additional supply sources are projected within the planning period. Likewise, with a currently permitted average daily rate (ADR) of 245,000 gallons per day, no increase in the permitted capacity is anticipated within the planning period.

Baker Water System Permit Information (values in gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
200,000	245,000	19910141	Mar 2004	720,000	Ground	Floridan

Baker Water System Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Baker #1	AAA0549	595'	514'	6"	0	150
Baker #2	AAA0550	708'	520'	12"	75	500
Baker #3	AAA5055	677'	408'	16"	75	500

Baker Water System Current and Projected Conditions

	Present	2008	2010	2013
Population Served	2,625	2,756	2,887	
Avg. Daily Demand (GPD)	200,000	210,000	220,000	
Demand per Capita (GPD)	76	76	76	
Available Facility Capacity (GPD)	720,000	720,000	720,000	
Facility Capacity Surplus (Deficit)	520,000	510,000	500,000	
Permitted Amount ADR (*Expires 3/2004)	245,000	245,000*	245,000*	245,000*
Permitted Surplus (Deficit) ADR	45,000	35,000	25,000	

Crestview (City of)

The City of Crestview operates its own water utility system. A map of the Crestview water service area is included in Appendix C. This system derives all its source supply from the Floridan aquifer via six (6) wells. These six wells have a total production annual daily production capacity of 2.3 MGD. The current average daily withdrawal from these wells is 1.9 MGD. Crestview's consumptive use permit allows an annual average daily withdrawal of up to 3.71 MGD through year 2009. Crestview currently has a seventh well under construction that is rated at 800 gpm (1.1 MGD) and is anticipated to be on-line during year 2003. Once the seventh well is on-line, Crestview will have a total average annual production capacity of 3.4 MGD. Two additional wells of the same rated capacity (800 gpm) are planned for years 2005/2006 and 2009/2010.

City of Crestview Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
Requested	3.71	19830023	May 2009	Requested	Ground	Floridan

City of Crestview Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Crestview #1	AAA5147	604'	430'	10"	50	300
Crestview #2	AAA5148	600'	440'	10"	50	449
Crestview #3	AAA5146	710'	463'	16"	50	457
Crestview #4	AAA0548	643'	423'	16"	100	425
Crestview #5	AAA5149	638'	460'	18"	100	835
Crestview #6	AAA9098	618'	430'	24"	100	800

City of Crestview Current and Projected Conditions

	Present	2008	2010	2013
Population Served	15,466	17,929	19,021	20,784
Avg. Daily Demand (MGD)	1.9	2.2	2.4	2.6
Demand per Capita (GPD)	123	123	126	125
Available Facility Capacity (MGD)	2.3	4.7	5.8	5.8
Facility Capacity Surplus (Deficit)	4.0	2.5	3.4	3.2
Permitted Amount ADR (*Expires 5/2009)	3.71	3.71	3.71*	3.71*
Permitted Surplus (Deficit) ADR	1.95	1.51	1.31	1.11

Destin Water Users, Inc.

Destin Water Users (DWU) is a not-for-profit member owned cooperative, which serves the City of Destin and a portion of coastal southeast-unincorporated Okaloosa County. A map of the DWU service area is included in Appendix C. DWU has seven (7) Floridan aquifer wells with a combined production capacity of over 9 million gallons per day. DWU's consumptive use permit, which expires in 2006, allows an average daily annual withdrawal of 3.46 MGD. Like other utilities located within the Northwest Florida Water Management District's Water Use Caution area, DWU is experiencing a significant cone of depression in the Florida aquifer due to pumpage. To mitigate this, DWU has an agreement (See Appendix B) to purchase water from South Walton Utility Company's Rock Hill wellfield in mid Walton County. Under this agreement, DWU is entitled to at least one-half the capacity of the well field (2.42 MGD). The Rock Hill wellfield is permitted for 4.84 MGD and has a current production capacity of 2.88 MGD. The Rock Hill wellfield and South Walton Utility Company's consumptive use permit are discussed later in this report under South Walton Utility. A table summarizing water transferred from the inland well field to the two coastal service areas is also included after the South Walton Utility section.

Destin Water Users Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
3.40	3.46	19830102	September 2006	8.712	Ground	Floridan

Destin Water Users Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
DWU #2	AAA0464	662'	460'	16"	125	1300
DWU #3	AAA0462	746'	465'	16"	125	1000
DWU #4	AAA0463	746'	457'	16"	100	1000
DWU #5	AAA0461	747'	503'	16"	100	1000
DWU #7	AAA0465	606'	425'	20"	100	850
DWU #8	AAA6926	677'	510'	12"	60	600
DWU #9	AAA9321	670'	505'	12"	50	600

Destin Water Users Current and Projected Conditions

	Present	2008	2010	2013
Population Served ¹	27,678	35,083	36,428	38,743
Avg. Daily Demand (MGD)	3.40	4.31	4.48	4.76
Demand per Capita (GPD)	123	123	123	123
Available Facility Capacity (MGD)	8.712	9.360	9.360	10.152
Facility Capacity Surplus (Deficit)	5.312	5.05	4.88	5.392
Permitted Amount ADR (*Expires 9/2006) ^{2,3}	5.88	5.88*	5.88*	5.88*
Permitted Surplus (Deficit) ADR	2.48	1.57	1.40	1.12

¹ Includes permanent and average seasonal populations

² DWU permit allowing for 3.46 MGD annual average expires 9/2006

³ Permitted amount includes 3.46 MGD from DWU supplies and 2.42 MGD wholesale purchase from South Walton Utilities (Rock Hill Wellfield)

Holt Water Works, Inc.

The Holt Water Works is a not-for-profit member owned cooperative utility system that serves the community of Holt that is approximately 12 miles southwest of Crestview on HWY 90. A detailed map of the system's service area is included in Appendix C. The system currently serves 492 customers with a population of 1,722. Supply sources for this system are two (2) Floridan aquifer wells, each of which has a rated capacity of 205 gallons per minute (295,000 GPD). Since there are only two supply sources for this system, the supply source capacity is 295,000 GPD based on section 3.2.1.1 of *Recommended Standards For Water Works* that reads as follows:

“The total developed groundwater source capacity shall equal or exceed the design maximum day demand and equal or exceed the design average day demand with the largest producing well out of service.¹”

The Holt Water Works system has a planned expansion to pick up customers within the Wilkerson Bluff and Yellow River Valley areas. One additional well (500 GPM) and storage tank is planned to accommodate this expansion. The project is planned for 2003. The population projections in the table below are based on a 5% annual growth rate of the existing customer base including the new customers that will be picked up pending completion of the proposed project in 2003. The system's presently permitted ADR of 130,000 GPD will require an increase to accommodate the anticipated growth and system expansion.

Holt Water Works Permit Information (values in gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
100,000	130,000	19841586	July 2004	300,000	Ground	Floridan

Holt Water Works Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Holt #1	AAA5092	673'	618'	8"	25	205
Holt #2	AAA5094	645'	540'	6"	25	205

Holt Water Works Users Current and Projected Conditions

	Present	2008	2010	2013
Population Served	1,722	3,073	3,598	3,955
Avg. Daily Demand (GPD)	96,755	170,600	187,600	196,980
Demand per Capita (GPD)	56	56	52	50
Available Supply (GPD)	295,200	590,400	590,400	590,400
Facility Capacity Surplus (Deficit)	198,445	419,800	402,800	393,420
Permitted Amount ADR (*Expires 7/2004)	130,000	130,000*	130,000*	130,000*
Permitted Surplus (Deficit) ADR	33,245	(40,600)	(57,600)	(66,980)

Laurel Hill (City of)

The Laurel Hill Water System is a municipally owned and operated utility that serves the community in and around Laurel Hill, Florida. Laurel Hill is located fifteen miles north

¹ Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers. Recommended standards for water works. Albany, NY: Health Research, Inc., 1997.

of Crestview. A detailed map of the system's service area is included in Appendix C. The Laurel Hill Water System has two (2) Floridan aquifer wells each of which has a rated capacity of 308,000 GPD. However, as noted for Holt above, there are only two supply sources for this system and the supply source capacity is 308,000 GPD. Growth of the customer base is projected to increase at a modest 2.7% according to their management. No additional supply sources are anticipated within the planning period. Likewise, with a currently permitted ADR of 170,000 GPD, no increase in the permitted capacity is anticipated within the planning interval.

City of Laurel Hill Permit Information (values in gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
Requested	170,000	19850236	Jan 2009	Requested	Ground	Floridan

City of Laurel Hill Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Laurel Hill #3	AAA9303	500'	300'	8"	25	250
Laurel Hill #4	AAA9302	485'	262'	12"	50	250

City of Laurel Hill Current and Projected Conditions

	Present	2008	2010	2013
Population Served	1269	1489	1570	1701
Avg. Daily Demand (GPD)	100,000	117,300	123,800	134,000
Demand per Capita (GPD)	79	79	79	79
Available Supply (GPD)	308,000	308,000	308,000	308,000
Facility Capacity Surplus (Deficit)	208,000	190,700	184,200	174,000
Permitted Amount ADR (*Expires 1/2009)	170,000	170,000	170,000*	170,000*
Permitted Surplus (Deficit) ADR	70,000	52,700	46,200	36,000

Milligan Water System, Inc.

The Milligan Water System serves the community in and around Milligan, Florida. Milligan is located approximately four miles west of Crestview and is a member owned cooperative. A detailed map of the system's service area is included in Appendix C. The Milligan Water System has two (2) Floridan aquifer wells representing a total available supply of 288,000 GPD. Growth of the customer base is projected to increase at a modest 1.3% according to their management. No additional supply sources are anticipated within

the planning period. Likewise, with a currently permitted ADR of 155,000 GPD, no increase in the permitted capacity is anticipated within the planning interval.

Milligan Water System Permit Information (values in gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
80,000	155,000	19900033	Aug 2007	288,000	Ground	Floridan

Milligan Water System Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Milligan #1	AAA5057	503'	351'	10"	15	200
Milligan #2	AAA5054	591'	500'	12"	25	200

Milligan Water System Current and Projected Conditions

	Present	2008	2010	2013
Population Served	1,841	1,933	2,029	2,130
Avg. Daily Demand (GPD)	80,000	84,000	88,200	92,610
Demand per Capita (GPD)	43	43	43	43
Available Supply (GPD)	288,000	288,000	288,000	288,000
Facility Capacity Surplus (Deficit)	208,000	204,000	199,800	195,390
Permitted Amount ADR (*Expires 7/2007)	155,000	155,000*	155,000*	155,000*
Permitted Surplus (Deficit) ADR	75,000	71,000	66,800	62,390

Niceville (City of)

The City of Niceville is a municipally owned and operated utility system. This system has nine (9) Floridan aquifer wells serves a population that includes residents of unincorporated Okaloosa County. These nine (9) wells have a total design production (source capacity) of 4.0 MGD. The population of the Niceville service area is expected to increase from 19,380 (current) to 22,700 in year 2013. No additional supply sources are anticipated within this planning period, however the currently permitted ADR of 3.03 MGD will likely require a slight increase toward the end of the planning period.

City of Niceville Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
2.82	3.03	19840110	April 2004	4.00	Ground	Floridan

City of Niceville Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Niceville #1	AAA5068	465'	340'	10"	75	520
Niceville #2	AAA5067	471'	318'	16"	75	500
Niceville #3	AAA5066	523'	375'	16"	100	510
Niceville #4	AAA5069	635'	373'	10"	40	260
Niceville #5	AAA5070	499'	382'	16"	100	850
Niceville #6	AAA5064	505'	310'	16"	100	660
Niceville #8	AAA5065	800'	586'	16"	40	425
Niceville #10	AAA5063	520'	350'	18"	100	600
Niceville #11	AAB0111	800'	594'	18"	100	700

City of Niceville Current and Projected Conditions

	Present	2008	2010	2013
Population Served	19,380	21,200	21,800	22,700
Avg. Daily Demand (MGD)	2.82	3.02	3.09	3.19
Demand per Capita (GPD)	146	142	142	141
Available Facility Capacity (MGD)	4.00	4.00	4.00	4.00
Facility Capacity Surplus (Deficit)	1.18	0.98	0.91	0.81
Permitted Amount ADR (*Expires 4/2004)	3.03	3.03*	3.03*	3.03*
Permitted Surplus (Deficit) ADR	.21	.01	(.06)	(.16)

Okaloosa County (Water & Sewer System)
Bluewater Service Area

The Bluewater service area is located east of Niceville and Rocky Bayou. It is bounded by Eglin Air Force base on the north, Rocky Bayou on the west, Choctawhatchee Bay on the south, and Seminole Community to the east. A detailed map of the system's service area is included in Appendix C. Three (3) Floridan wells provide water to this service area. No additional supply sources to serve this area are projected for the planning period and the currently permitted ADR of 1.20 MGD should be sufficient through 2010. A slight increase in the permitted ADR will likely be required prior to 2013.

Okaloosa County - Bluewater Service Area Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
1.07	1.20	19850027	April 2005	2.02	Ground	Floridan

Okaloosa County - Bluewater Service Area Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
OCWS/BW-2	AAA5173	489'	310'	18"	50	600
OCWS/BW-3	AAA5175	550'	350'	24"	100	900
OCWS/BW-4	AAA5174	615'	415'	24"	100	800

Okaloosa County - Bluewater Service Area Current and Projected Conditions

	Present	2008	2010	2013
Population Served	8,834	9,550	9,786	10,143
Avg. Daily Demand (MGD)	1.07	1.16	1.19	1.23
Demand per Capita (GPD)	121	121	122	121
Available Facility Capacity (MGD)	2.02	2.02	2.02	2.02
Facility Capacity Surplus (Deficit)	0.95	0.86	0.83	0.79
Permitted Amount ADR (*Expires 4/2005)	1.20	1.20*	1.20*	1.20*
Permitted Surplus (Deficit) ADR	.13	.04	.01	(.03)

**Okaloosa County (Water & Sewer System)
County West Service Area**

This service area is located along the US Highway 98 corridor between Hurlburt Field and the Santa Rosa county line. This area is located within the Water Management District's Water Use Caution area. A detailed map of the system's service area is included in Appendix C. Three Floridan aquifer wells serve this area. Because of the concern of saltwater intrusion in these coastal wells, a plan was proposed in the Garniers and Mid County consumptive use permits to reduce the withdrawals from these wells and the deficit supply provided by an interconnecting water main with the Garniers service area. A pipeline connecting the Mid County well field with the Garniers service area is also included in the plan. The reduction in available supply reflected in the table below represents a gradual reduction in withdrawals from 1998 levels. All supply deficits demonstrated by these reductions will be replaced by supply from the Mid County inland wells.

Okaloosa County – County West Service Area Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
0.60	0.81	19830075	June 2005	1.30	Ground	Floridan

Okaloosa County – County West Service Area Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
OCWS/CW-2	AAA5193	1061'	686'	12"	40	400
OCWS/CW-3	AAA5192	952'	695'	12"	40	500
OCWS/CW-4	AAA8755	902'	610'	24"	100	750

Okaloosa County – County West Service Area Current and Projected Conditions

	Present	2008	2010	2013
Population Served	7,885	9,234	9,682	10,353
Avg. Daily Demand (MGD)	0.681	0.796	0.828	0.877
Demand per Capita (GPD)	86	86	86	85
Available Facility Capacity (MGD)	1.3	0.47	0.43	0.43
Facility Capacity Surplus (Deficit) ¹	0.619	(0.326)	(0.398)	(0.447)
Permitted Amount ADR (*Expires 6/2005)	.81	.81*	.81*	.81*
Permitted Surplus (Deficit) ADR	.129	.014	(.018)	(.067)

¹ Deficits will be met from inland supplies (Mid County)

Okaloosa County (Water & Sewer System)
Garniers Service Area

The Garniers service area is located in southern Okaloosa County and is bounded by Eglin Air Force Base on the north and east, Fort Walton Beach on the south and west and also by the Gulf of Mexico on the South. The service area includes the Garniers Mainland area and the Okaloosa Island area. The area serves a transient tourist population of between 7,800 and 13,000 depending on the season. A detailed map of the system's service area is included in Appendix C

This service area is located within the Water Management District's Water Use Caution area. Eleven (11) Floridan wells serve this service area. Because this area has experienced a deep cone of depression in the Floridan aquifer and due to concerns of possible saltwater intrusion, the recent Garniers and Mid County consumptive use permits included a plan to reduce the withdrawals from the existing coastal supply wells. This reduction in coastal withdrawals would be accomplished by constructing an interconnecting water main between the Garniers and Mid County systems, utilizing existing available excess supply capacity in the Mid County system, and developing additional wells in this inland service area to meet future needs for the coastal area. The reduction in available supply as shown in the table below reflects a gradual reduction in withdrawals from 1998 levels as described in

the permits. All supply deficits demonstrated by these reductions will be replaced by supply from the Mid County system.

Okaloosa County - Garniers Service Area Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
4.96	5.75	19840092	April 2006	7.21	Ground	Floridan

Okaloosa County - Garniers Service Area Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
OCWS-1	AAA5184	600'	495'	16"	75	500
OCWS-2	AAA5179	680'	433'	16"	75	760
OCWS-3	AAA5185	652'	500'	12"	60	420
OCWS-4	AAA5186	652'	500'	24"	100	870
OCWS-5	AAA5181	734'	546'	12"	60	530
OCWS-6	AAA5188	650'	515'	24"	100	660
OCWS-7	AAA5180	770'	560'	24"	100	835
OCWS-8	AAA5187	864'	518'	24"	100	600
OCWS-9	AAA5190	910'	518'	16"	60	560
OCWS-10	AAA5189	834'	590'	24"	100	1000
OCWS-11	AAA8754	745'	495'	24"	100	770

Okaloosa County - Garniers Service Area Current and Projected Conditions

	Present	2008	2010	2013
Population Served (Avg)	49,954	56,044	57,722	60,187
Population Served (Peak)	55,130	61,918	63,829	64,767
Avg. Daily Demand (MGD)	4.96	5.803	5.926	6.106
Demand per Capita (GPD)	99	104	103	101
Available Facility Capacity (MGD)	7.21	4.79	4.68	4.68
Facility Capacity Surplus (Deficit) ¹	2.25	(1.013)	(1.246)	(1.426)
Permitted Amount ADR *(Expires 4/2006)	5.75	5.75*	5.75*	5.75*
Permitted Surplus (Deficit) ADR	0.79	(0.053)	(0.176)	(.356)

¹ Deficits will be met from inland supplies (Mid-County)

**Okaloosa County (Water & Sewer System)
Mid County Service Area**

The Mid County service area is located in central Okaloosa County surrounding the City of Crestview on three sides. The Mid County System is bounded on the north by the City of Crestview and the Auburn Water System service areas, on the south by Eglin Air

Force Base, on the east by the Walton County Line and on the west by the Yellow River and the service area of the Holt Water System. That portion of the County service area in the vicinity of the Bob Sikes Airport and Industrial Park northeast of Crestview is surrounded on all four sides by the service area of the Auburn Water System. A detailed map of the system's service area is included in Appendix C

Four (4) Floridan wells serve this area. Two (2) additional Floridan wells are scheduled for construction in this service area in 2005, with a total additional supply of 1.44 MGD. These wells are intended to not only serve the increasing population of the Mid County service area, but also to supply excess capacity to the coastal areas. The excess capacity will be provided to the coastal areas via an interconnecting water main between the Mid County and Garniers systems and another between the Garniers and County West areas. These interconnections will facilitate the reductions in coastal withdrawals from 1998 levels as described in the respective consumptive use permits.

Okaloosa County – Mid County Service Area Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
0.58	3.61	19840112	Mar 2018	2.74	Ground	Floridan

Okaloosa County – Mid County Service Area Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
OCWS/MC-1	AAA5171	740'	401'	18"	60	600
OCWS/MC-2	AAA5172	664'	536'	18"	150	750
OCWS/MC-3	AAA5169	603'	392'	18"	125	750
OCWS/MC-5	AAA4768	710'	420'	24"	150	750

Okaloosa County – Mid County Service Area Current and Projected Conditions

	Present	2008	2010	2013
Population Served	4,446	5,000	5,332	5,863
Avg. Daily Demand (MGD)	0.58	.643	.686	.754
Demand per Capita (GPD)	130	129	129	129
Available Facility Capacity (MGD)	1.91	2.63	2.63	2.63
Facility Capacity Surplus (Deficit)	1.33	1.987	1.944	1.876
Permitted Amount ADR (Expires 3/2018)	3.61	3.61	3.61	3.61
Permitted Surplus (Deficit) ADR	3.03	2.967	2.924	2.856

The following table summarizes the facility capacity surplus and deficits for the future interconnected systems of Mid County, Garniers, and County West. Existing or planned supplies in Mid County will meet all deficits shown for Garniers and County West service areas.

Okaloosa County – Summary of Surplus (Deficit) after Interconnections

	Present	2008	2010	2013
Mid County Facility Capacity Surplus (Deficit)	1.33	1.987	1.944	1.876
County West Facility Capacity Surplus (Deficit) ¹	.619	(.326)	(.398)	(.447)
Garniers Facility Capacity Surplus (Deficit) ¹	2.25	(1.013)	(1.246)	(1.426)
Total Interconnected Facility Capacity Surplus (Deficit)	4.199	0.648	0.300	0.003

¹ All deficits are met by Mid County Supplies

Seminole Community Center, Inc.

The Seminole Community Center Water Department serves the community in and around the village of Seminole, Florida. Seminole is located approximately 5 miles southeast of Niceville and immediately east of Bluewater Bay on Highway 20. This area is located within the Water Management District's Water Use Caution area. A detailed map of the system's service area is included in Appendix C. Information necessary for the preparation of this work plan was not provided by the Seminole Water System, despite several requests. The Seminole Water System has five (5) Floridan aquifer wells representing a total available supply of 345,600 GPD. Growth of the customer base is projected to increase at a modest 3.7% according to the NFWFMD's staff report that accompanies their current consumptive use permit. No additional supply sources are anticipated within the planning period. The currently permitted ADR of 113,000 GPD should be sufficient through 2006. A slight increase in the permitted ADR may likely be required prior during the next permit renewal, according to information in the above referenced staff report.

Seminole Community Center Permit Information (values in gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
Requested	113,000	19860020	April 2006	Requested	Ground	Floridan

Seminole Community Center Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
Seminole #2	AAA5080	450'	-	4"	5	60
Seminole #3	AAA5082	332'	285'	4"	5	60
Seminole #5	AAA5050	450'	-	4"	5	60
Seminole #6	AAA5052	450'	-	4"	5	60
Seminole #7	AAA8346	480'	298'	4"	5	60

Seminole Community Center Current and Projected Conditions

	2000*	2008	2010	2013
Population Served				
Avg. Daily Demand (GPD)	96,273			
Demand per Capita (GPD)				
Available Supply (GPD)	345,600	345,600	345,600	345,600
Facility Capacity Surplus (Deficit)	249,327			
Permitted Amount ADR (*Expires 4/2006)	113,000	113,000*	113,000*	113,000*
Permitted Surplus (Deficit) ADR	16,727			

** 2000 Pumping Reports from the NFWMD were the only records available*

South Walton Utility Co., Inc.

South Walton Utility primarily serves the portion of Walton County south of Choctawhatchee Bay. The portion of South Walton's service area in Okaloosa County is located along the US Highway 98 corridor between Destin Water Users service area and the Walton county line. The area is bounded by Choctawhatchee Bay on the north, the Walton County line on the east, US Hwy 98 on the south and SR 293 (Danny Wuerffel Way) on the west. This area is located within the Water Management District's Water Use Caution area. A detailed map of the system's service area is included in Appendix C. Nine (9) Floridan aquifer wells serve the whole of South Walton's service area, with only one (1) located in Okaloosa County. Because of the concern of saltwater intrusion in their coastal wells, a plan was proposed in the South Walton consumptive use permit to reduce the withdrawals from these wells and the deficit supply be provided by an interconnecting water main with an inland wellfield (Rock Hill). Included in this permit is the stipulation for the construction of

three (3) additional inland wells and subsequent reductions in the coastal withdrawals by 2018.

South Walton Utility Permit Information (values in million gallons per day)

Current ADR	Permitted ADR	CUP #	Permit Expires	Existing Capacity	Supply Source	Aquifer
2.50	7.19	19980046 19840010	June 2018 June 2006	8.57	Ground	Floridan

South Walton Utility Well Information

Well Name	State ID	Total Depth	Depth of Casing	Diameter	Horsepower	GPM
SWU #1	AAA0457	683'	479'	10"	30	430
SWU #2	AAA6927	600'	400'	18"	75	1000
SWU #3	AAA0458	572'	426'	16"	60	700
SWU #4	AAA0460	655'	555'	16"	60	700
SWU #5	AAA6928	730'	435'	16"	60	520
SWU #6	AAA0459	713'	495'	16"	100	1000
SWU #7	AAA1312	700'	480'	20"	100	1000
SWU #8	AAA8367	466'	240'	24"	100	1000
SWU #9	AAA8368	512'	220'	24"	100	1000

South Walton Utility Current and Projected Conditions

	Present	2008	2010	2013
Population Served (Avg)	25,155	35,895	39,574	45,812
Population Served (Peak)	45,280	60,679	66,899	77,443
Avg. Daily Demand (MGD)	2.244	2.939	3.205	3.667
Demand per Capita (GPD)	99	126	132	137
Available Facility Capacity (MGD)	8.568	11.448	11.448	12.888
Facility Capacity Surplus (Deficit)	6.324	8.509	8.243	9.221
Permitted Amount ADR (*Expires 6/2006) ¹	7.19	5.59*	5.18*	4.57*
Permitted Surplus (Deficit) ADR	4.692	2.651	1.975	0.903

¹ Includes 2.35 MGD from Coastal Wells and remainder from Rock Hill wellfield (4.84 MGD less wholesale sale to Destin Water Users).

The following table summarizes the supply surpluses for the interconnected systems of Destin Water Users and South Walton Utility. Existing or planned supplies in the Rock Hill wellfield will meet any future deficits for Destin and South Walton service areas.

Destin/South Walton – Summary of Surplus (Deficit) after Interconnections

	Present	2008	2010	2013
South Walton Avg. Daily Demand (MGD)	2.244	2.939	3.205	3.667
South Walton Coastal Supply (*Expires 6/2006)	2.35	2.35*	2.35*	2.35*
South Walton Rock Hill Wellfield Supply (MGD)	4.586	3.24	2.83	2.22
South Walton Capacity Surplus (Deficit)	4.692	2.651	1.975	0.903
Destin Avg. Daily Demand (MGD)	3.40	4.31	4.48	4.76
Destin Coastal Supply (**Expires 9/2006)	3.46	3.46**	3.46**	3.46**
Wholesale Purchase from South Walton (MGD)	0.254	1.600	2.010	2.620
Destin Capacity Surplus (Deficit)	0.314	0.750	0.990	1.320

III. REQUIRED FACILITIES

At the time of this report, ten of the fourteen service areas had responded with information about their system. The previous comparison of projected water demands to available supplies identified deficits in three of the nine service areas: Garniers, Mid County, and County West. These deficits are in part due to the planned reduction in withdrawals from coastal supplies (County West and Garniers) and the utilization and development of more inland supply sources (Mid County) as required by current consumptive use permits issued by the Water Management District. All three of these service areas are under the auspices of Okaloosa County Water & Sewer, an enterprise department of Okaloosa County. Due to the interrelation of these three service areas with their planned interconnections and the shift to obtain water supply from the inland system, no differentiation will be made as to what project is required for which service area. The projects and required facilities are required for the three systems, collectively. The required facilities and year required for implementation are as follows:

- Interconnection between Mid County and Garniers service areas (2005)
- Interconnection between Garniers and County West service areas (2005)
- Additional storage facilities for Garniers and Mid County service areas (2005)
- Two additional Floridan water supply wells (0.36 MGD each) in Mid County (2005)

Additionally, South Walton Utility Company has similar conditions in their consumptive use permits for coastal withdrawal reductions. The following facilities are scheduled to be constructed to facilitate these reductions:

- Three additional Floridan wells in the Rock Hill Well Field by 2018

IV. EXECUTIVE SUMMARY

There are fourteen service areas that provide potable water to the residents of unincorporated Okaloosa County. Okaloosa County (Okaloosa County Water & Sewer System) has full responsibility for four of the fourteen service areas. The remaining ten are municipally owned utilities, not-for-profit cooperatives, or private water systems.

The Floridan aquifer is the single source of supply for the fourteen service areas addressed by this plan. The Floridan aquifer has experienced significant declines in its potentiometric surface in coastal communities of Okaloosa County and continued declines may pose a threat of saltwater intrusion. The Water Management District has conditioned several consumptive use permits with reduction in withdrawals in coastal wells and increased utilization or development of inland well fields and sources. New supply sources identified and required within the planning period will be the Floridan aquifer, though development will be inland from the coast.

A comparison of supply source capacity to projected demands for each service area found four requiring additional sources. These four service areas are Okaloosa County's Garniers, County West, and Mid County, as well as South Walton Utilities. The major cause for additional needs in these areas is the reduction in withdrawals from coastal supplies and utilization and development of inland sources.

To implement and coordinate this work plan and its recommendations, amendments should be made to Okaloosa County's Comprehensive Plan and its Capital Improvement Element. Draft amendments to Section 2.7, Potable Water, and 2.10, Conservation, are included in Appendix D to this report. Necessary revisions to the Capital Improvement Element are included in Appendix E.